

## MIMICS Emerging Data Suggest Patency Protective Effect

**Las Vegas, USA, 9 October 2013** – Data presented here yesterday during the Late Breaking Clinical Trials session at VIVA13 show that a stent with unique three dimensional helical geometry, BioMimics 3D™, developed by Veryan Medical Ltd., (Horsham, UK) has demonstrated safety and promising clinical performance at twelve months in the treatment of patients with peripheral arterial disease (PAD) undergoing femoropopliteal artery intervention.

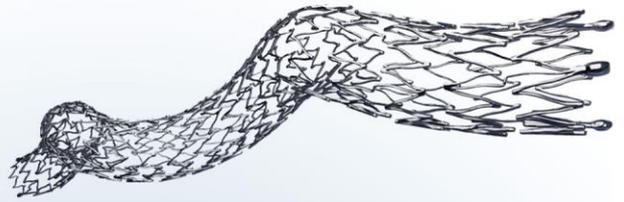
The MIMICS study is a prospective, 2:1 randomised controlled trial, conducted at eight German investigational centres, comparing the safety and efficacy of the BioMimics 3D™ stent to a straight nitinol stent (primarily the Bard LifeStent) in 76 patients with PAD undergoing femoropopliteal artery intervention.

The BioMimics 3D stent features unique 3D geometric curvature that closely mimics the natural helical geometry of the human vascular system. This stent is designed to promote swirling blood flow through the stented segment, which preclinical data have shown to significantly reduce the formation of neointimal hyperplasia, potentially conferring a vasoprotective effect through elevation of wall shear stress.

Data presented by PI Professor Thomas Zeller, Universitäts-Herzzentrum, Freiburg-Bad Krozingen, on behalf of the MIMICS investigators showed the 12-month Kaplan Meier (KM) estimate of freedom from clinically driven target lesion revascularization for subjects receiving the BioMimics 3D stent was 91.2%. The KM estimate of 12-month primary patency was 80.4% for BioMimics 3D subjects vs. 72.0% for the control group (day 365; P=0.436). No stent fractures were detected by core lab in BioMimics 3D or Control in 12-month X-rays. Twelve month data from the MIMICS study point to a correlation between primary patency and stent curvature, measured using bi-planar X-ray imaging in straight and bent knee positions. No loss of stent patency was observed in any subject where stent curvature measured  $>0.02 \text{ mm}^{-1}$ . Bi-planar X-ray imaging and computational fluid dynamic modelling showed increases in both swirling flow (55% (P=0.017)) and wall shear stress (18% (P=0.054)) for BioMimics 3D compared to Control. Interim 24-month data show that 76% of BioMimics 3D subjects gained a PSVR improvement between 12 and 24 months, which is 83% more than Control (P=0.067). Twenty four month follow-up assessments are ongoing.

These data provide support for the hypothesis that a stent with 3D geometric curvature will be patency-protective through development of swirling flow and elevation of wall shear stress. The helical geometry of the BioMimics 3D stent also enhances mechanical performance and biomechanical compatibility, intended to reduce stent fracture, vessel and stent kinking, deformation and subsequent vessel trauma during leg flexion, compared to straight nitinol stents.

“Data on the BioMimics 3D stent demonstrating promotion of swirling flow and increased wall shear stress, together with 12-month and emerging 24-month patency data, point to the merit of this innovative approach to stent design for femoropopliteal use” commented Professor Zeller. “We now need additional longer-term data to confirm these effects”.



Veryan received CE Mark approval for the BioMimics 3D stent in November 2012.

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**Media contact:**

Richard Kenyon  
[richard@rkpr.co.uk](mailto:richard@rkpr.co.uk)  
+44 7831 569940

**About Veryan Medical Ltd.**

Veryan is developing innovative solutions to improve the performance of vascular stents using the principles of biomimicry. Veryan's BioMimics 3D™ stent technology involves adapting traditional straight stent designs to a three-dimensional helical shape, which more closely mimics the natural geometry of the human vascular system. BioMimics 3D technology is designed to enhance clinical performance by improving flow conditions in, and biomechanical performance of, stented vessels.

Preclinical studies have shown that BioMimics 3D stent technology may significantly reduce restenosis (the narrowing of stented arterial segments) and confer significant mechanical benefits: the BioMimics 3D stent is more flexible, kink and fracture resistant than conventional counterparts.

To date, Veryan has received venture investments totalling GBP 17.7 million from Imperial Innovations, Seroba Kernel, Oxford Gateway, Nikko Principal and NESTA.

CAUTION: The BioMimics 3D stent is not available for sale or investigational use in the United States.

For further information, please visit: [www.veryanmed.com](http://www.veryanmed.com)

**About VIVA Physicians**

VIVA Physicians is a not-for-profit organization dedicated to advancing the field of vascular medicine and intervention through education and research. VIVA's mission is demonstrated through activities such as supporting a multidisciplinary fellowship, collaborating with International vascular symposia, interacting with policy makers, supporting and contributing to philanthropy. Since 2003, VIVA Physicians has sponsored an annual symposium in Las Vegas, Nevada where recognized experts from around the world come to share the latest research, learn about innovative technologies and therapies for vascular disease, and discuss the latest efforts to improve vascular patient care.

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